[0032] By way of illustration, MMS concerns a store and forward method for transmitting related items like graphics, video clips, sound files, short text messages and the like via wireless networks. Since an MMS message may contain different combinations of these items, a user may want to print various combinations of these items. However, some items (e.g., sound files) may not be printable, other items (e.g., graphics interchange format (GIF) files) may not be printable on an image forming device with which a cellular telephone communicates via a certain print data transmission protocol, while other items (e.g., text, JPEG (joint photographic experts group) format files) may be printable. Thus, the cellular telephone protocol adaptive print method 100 includes, at 120, identifying a print data transmission protocol by which a print job can be transmitted from a cellular telephone to an image forming device via a wireless communication link. Identifying the print data transmission protocol by which a print job can be transmitted to an image forming device facilitates determining which, if any, elements of a message like an MMS message may be printed by an image forming device that implements, for example, a receiver end of the print data transmission protocol.

[0033] MMS may be implemented over a wireless application protocol (WAP). WAP defines a secure specification that facilitates users accessing, substantially instantaneously, via their cellular telephones, MMS messages. The cellular telephones can include, but are not limited to, mobile phones, pagers, two way radios, smart phones, communication systems, and the like. WAP implementations can support wireless network technologies like cellular digital packet data (CDPD) networking, code division multiple access (CDMA) processing, global system for mobile communication (GSM) networking, time division multiple access (TDMA), and so on. WAP may be supported by operating systems including those engineered for handheld devices. Thus, the environment in which the cellular telephone operates may be varied, with differing print capabilities depending on the protocol(s) implemented between various cellular telephones and various image forming devices. Furthermore, the types of messages received, and the mix of print item elements encountered in those various messages may be varied. Thus, identifying the print data transmission protocol at 120 facilitates broadening and/or enriching the print experience of a user by making it more responsive to the varied environment and varied messages that can be encountered by the cellular telephone user.

[0034] At 120, identifying a print data transmission protocol may involve actions including, but not limited to, examining a logic on a cellular telephone to identify a supported cellular telephone transmission protocol, examining an image forming device with which the cellular telephone can communicate to determine an available image forming device that can print the print job, identifying an available wireless communication link between the cellular telephone and the image forming device with which the cellular telephone can communicate, and determining a cellular telephone transmission protocol(s) that can be employed to transmit a print job over the available wireless communication link(s) to the image forming device(s) with which the cellular telephone can communicate.

[0035] By way of illustration, in an MMS message, the presentation of the message may be coded into a message presentation file so that images, sounds, text and so on are displayed in a pre-determined order as one singular message. For printing, the presentation may need to be altered since certain types of content may not be printable for one or more reasons. For example, a wireless request to print an MMS message including a sound file or a certain graphic file may not be receivable or printable by a certain image forming device using the print data transmission protocol. Thus, broadening and/or enriching the print experience is facilitated by method 100 which may include, at 130, identifying, from printable elements in a print item, print job candidate elements that can be processed into a printer-ready format according to the print data transmission protocol. In other words, the capabilities of the print data transmission protocol can be used to determine which printable elements are printable and/or determine which printable elements are not printable so that time and resources can be optimized by not trying to print unprintable content.

[0036] For example, an MMS message may include a text portion, two graphics portions (a GIF portion, a JPEG portion) and an audio file. At 130, the method 100 may identify that the audio file is not printable. The method 100 may also identify, by referring to the print data transmission protocol identified at 120, that the JPEG graphic portion is printable on the image forming device with which the wireless mobile communication device will communicate via the print data transmission protocol while the GIF portion is not. The method 100 may also identify that the text portion is printable. Thus, the various printable elements of a print item can be identified as print job candidate elements by the method 100, and a user and/or logic can determine which, if any, of the print job candidate elements are to be processed into a print job element for transmission to an image forming device. While the print job candidate elements to process can be selected through a user interface or programmatically, the print job candidate elements that are processed into print job elements may also be filtered out of the set of printable elements. For example, a pre-determined, configurable filter that identifies desired printable elements based on attributes like type, size, time stamp, owner, originator, and so on may be employed to select the print job candidate elements that are to be processed.

[0037] At 140, after identifying the printable elements of the print item as print job candidate elements (e.g., the text and JPEG sections of an MMS message), the method 100 may include selectively processing a print job candidate element into a print job element formatted according to the print data transmission protocol. The method 100 also may include, at 150, processing the one or more print job elements into a print job. In one example, method 100 may also include transmitting the print job to the image-forming device. In another example, the print data transmission protocol is based on a Bluetooth wireless network, a Bluetooth basic print profile (BPP) and a markup language like XHTML (extensible hypertext markup language). In yet another example, the print data transmission protocol is Bluetooth.

[0038] Turning now to FIG. 2, an example implementation of block 140 from FIG. 1 is illustrated. In one example, at 242, print job candidate elements to process are identified. Then, at 244, printer-ready instructions are prepared. For example, in the MMS message described above, the printable text portion and the printable JPEG portion may be